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Hartmut Esser und Kerstin Hoenig

## Ability- oder Nobility-Tracking?

Die theoretische und empirische Revision einer verbreiteten Auffassung

Ein Vergleich der 16 deutschen Bundesländer mit den Daten der

“National Educational Panel Study” (NEPS).

University of Mannheim  
Faculty for Social Sciences  
Mannheim Centre for European Social Research

Seminar „Analytische Soziologie: Theorie  
und empirische Anwendungen“  
Venedig 12. November 2018

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# **The Standardposition**

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**Stronger educational  
inequality and  
inequity ...**

“ ... that early **tracking** is associated  
... with the generation of more educational **inequality** with  
particular **disadvantage** for **lower class** and **migrant** families.”  
(Müller&Kogan 2007)

**... without gains in  
efficiency!**

“Countries with a **tracked** (school-type  
tracked) education system have **higher** levels of  
**inequality** of educational opportunity by **social class** and  
**race/ethnicity**.” (van de Werfhorst 2007)

**Really?**

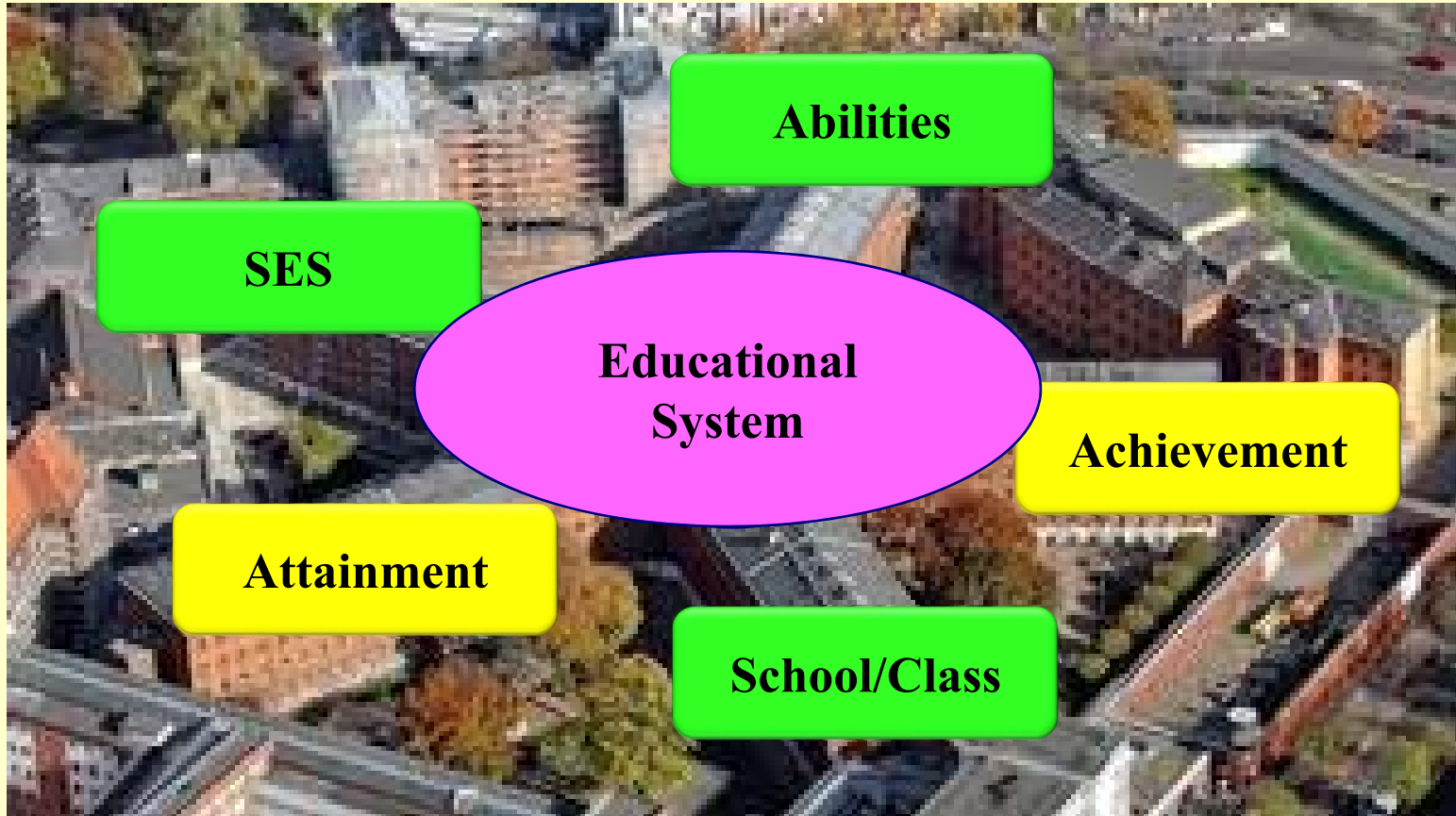
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**The  
„Model of Ability Tracking“**

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**MoAbiT**









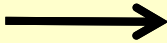


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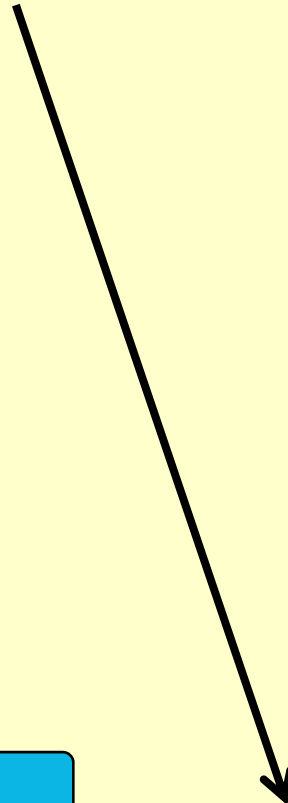
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## **The General Model**

**SES**



**Abilities/  
Achievement ES**



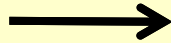
**School/Class**

- Curriculum
- Abilities
- SES
- Quality

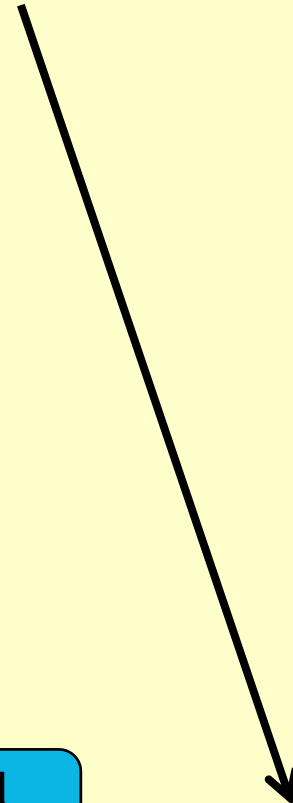


**Achievement**

**SES**



**Abilities/  
Achievement ES**



**... everywhere!**

**School/Class**

**ABL-Level  
Homogeneity**

**SES-Level  
Quality**

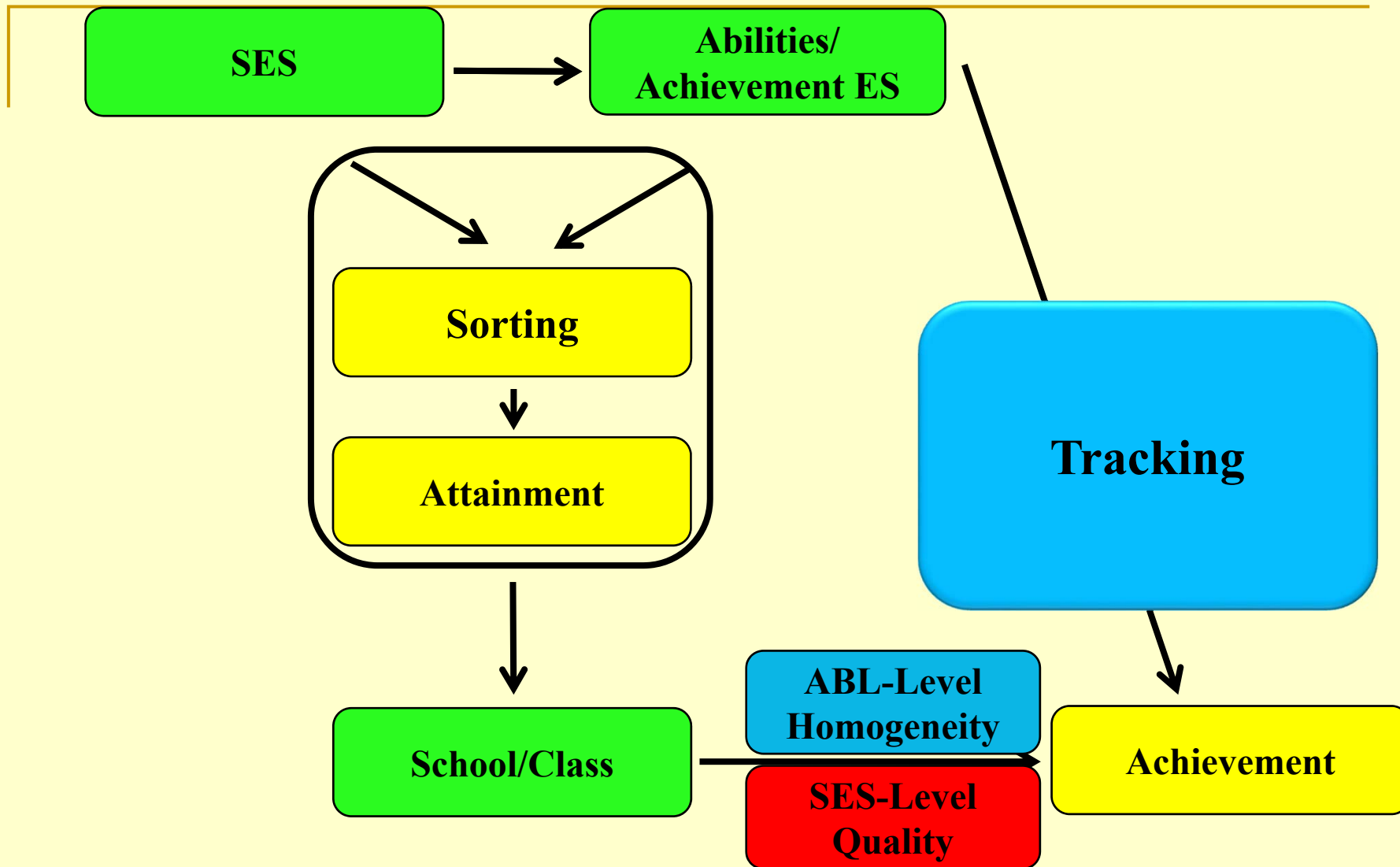


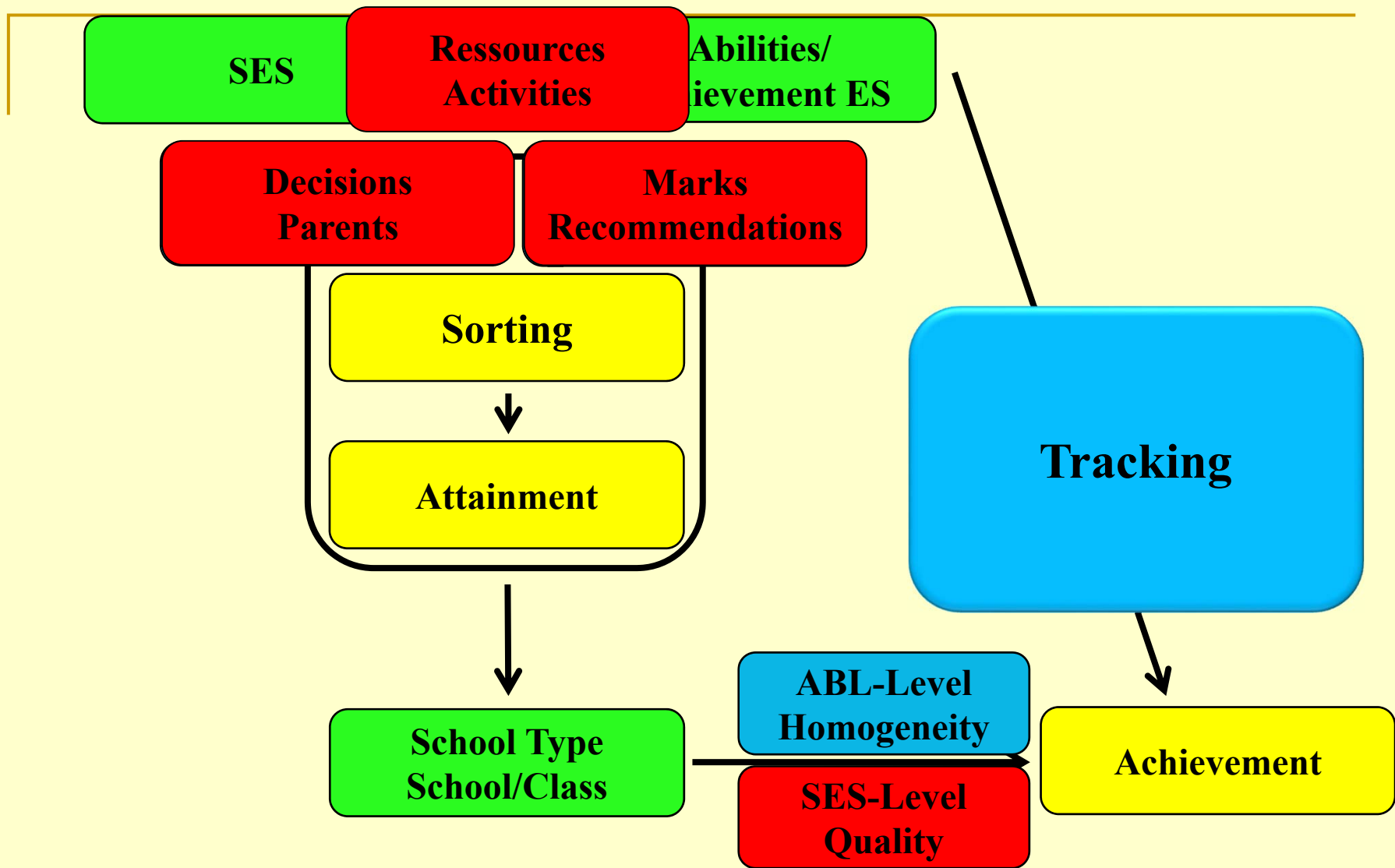
**Achievement**

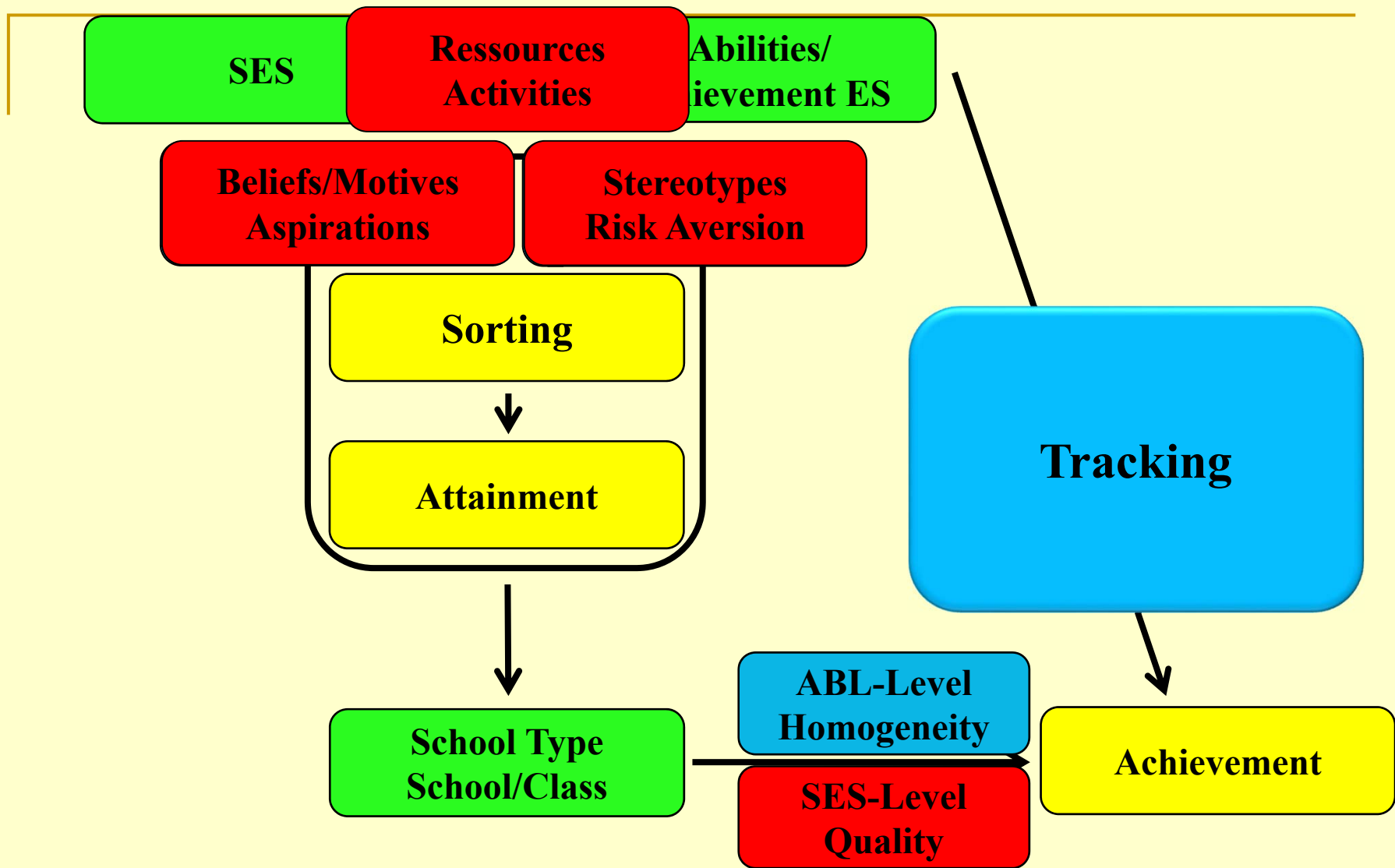
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**Ability Tracking 1:  
Standardposition**

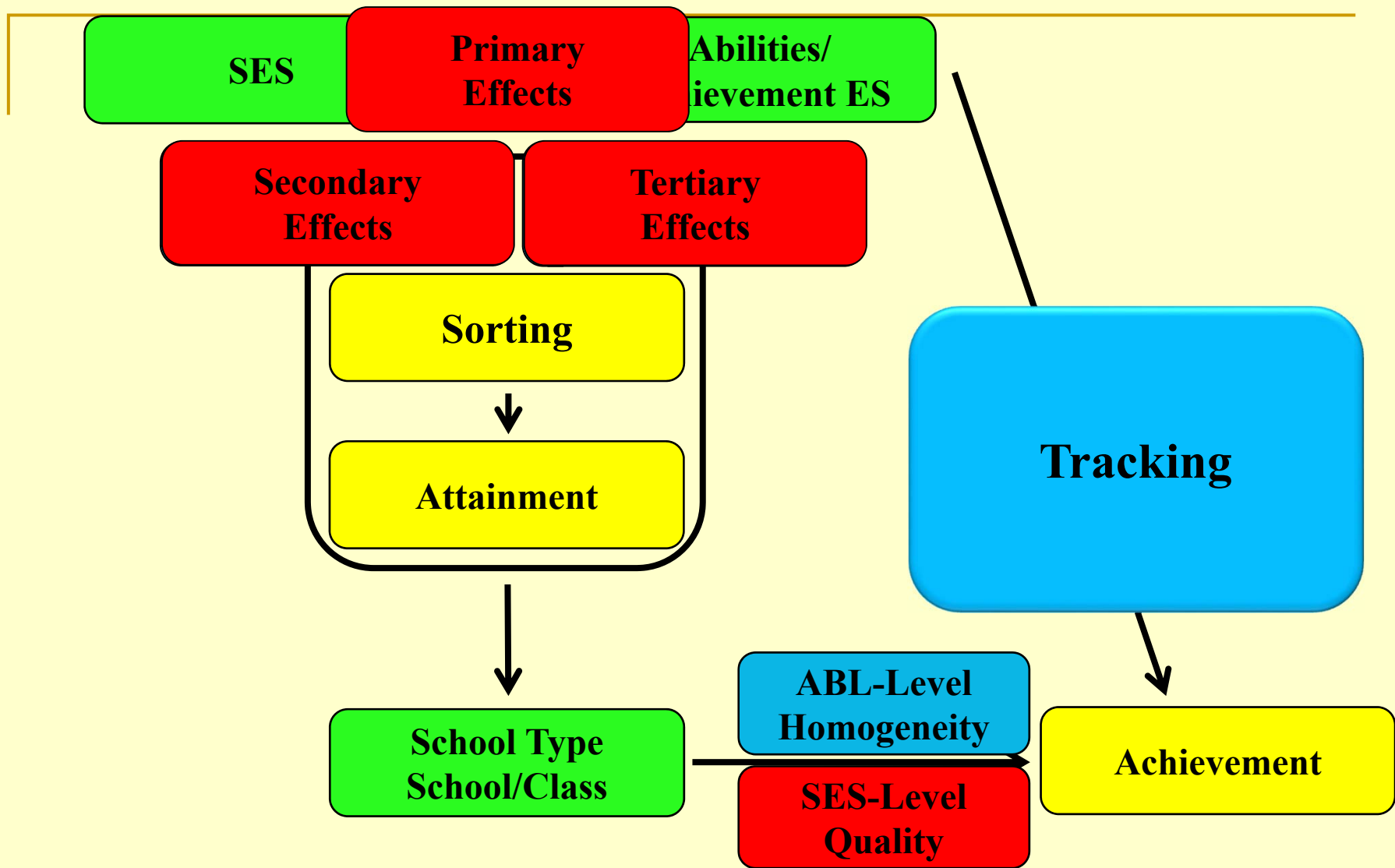
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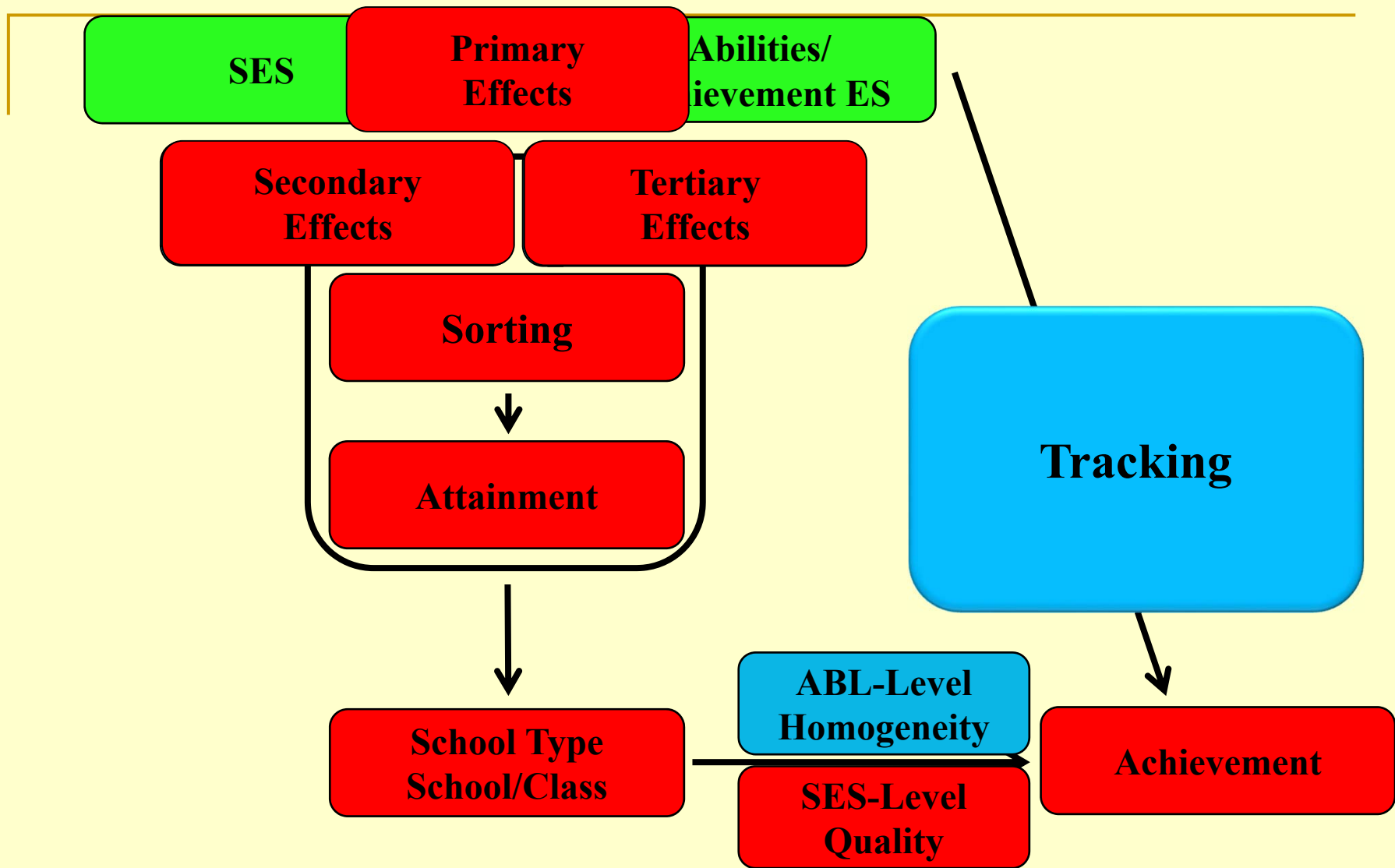








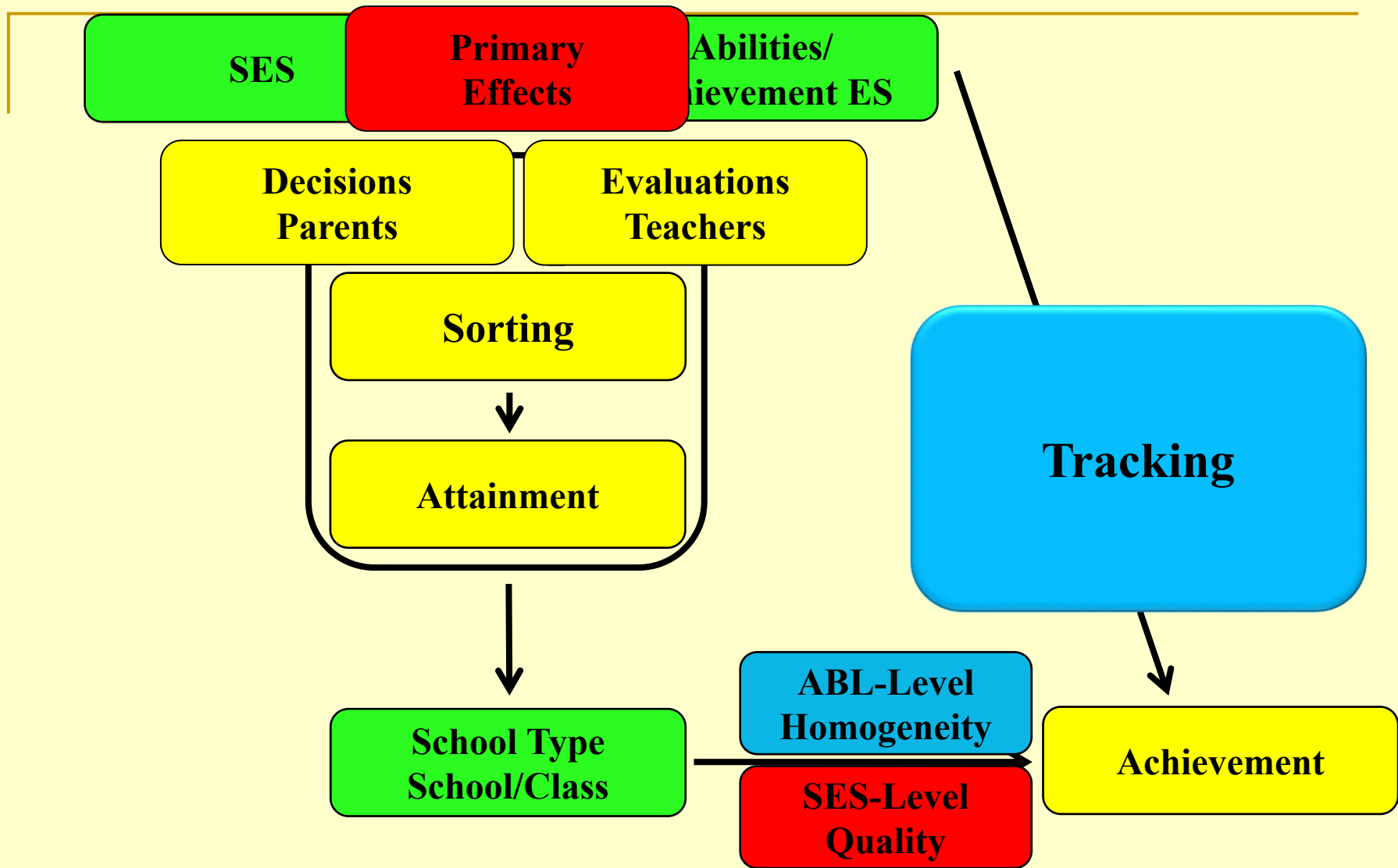


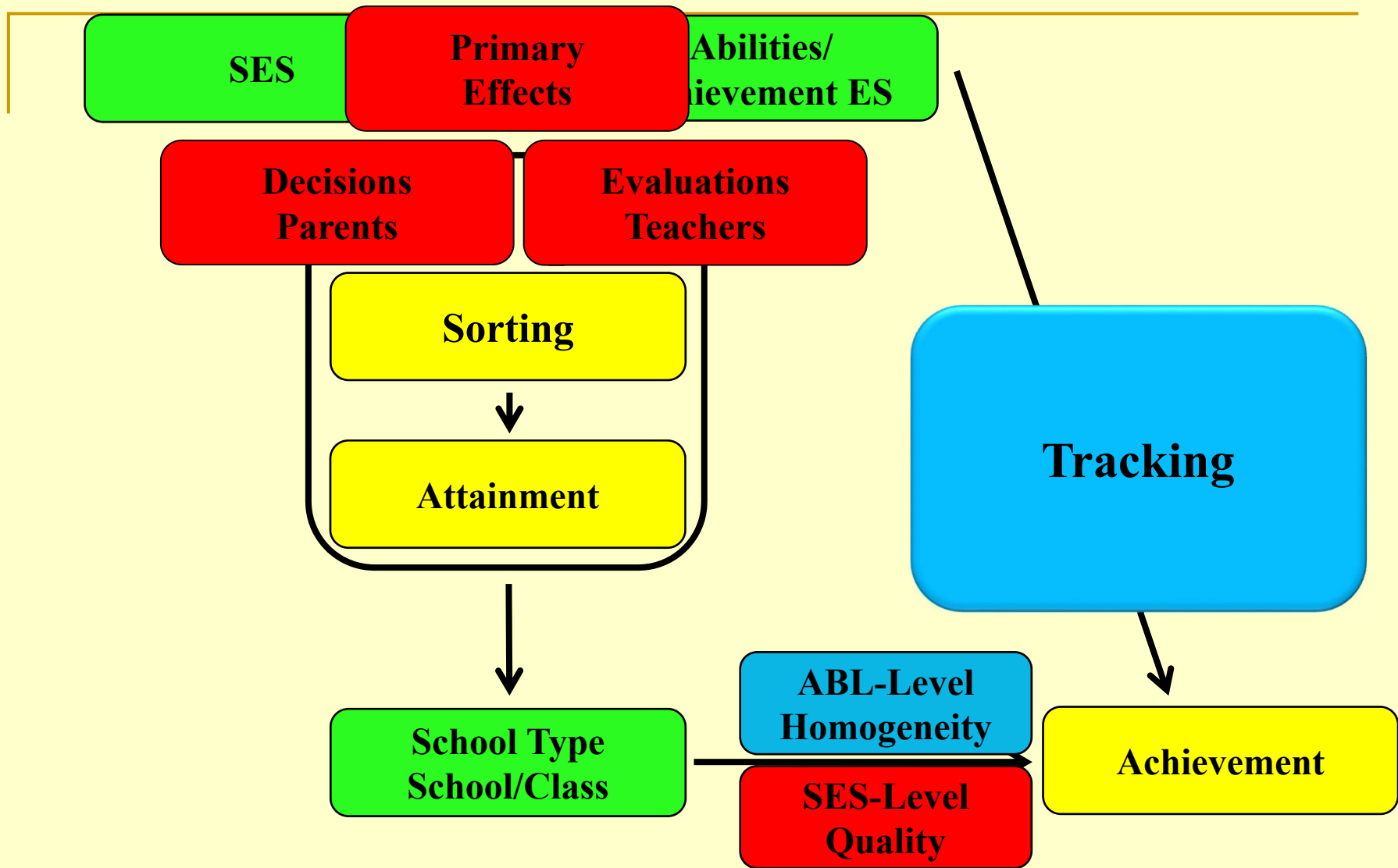


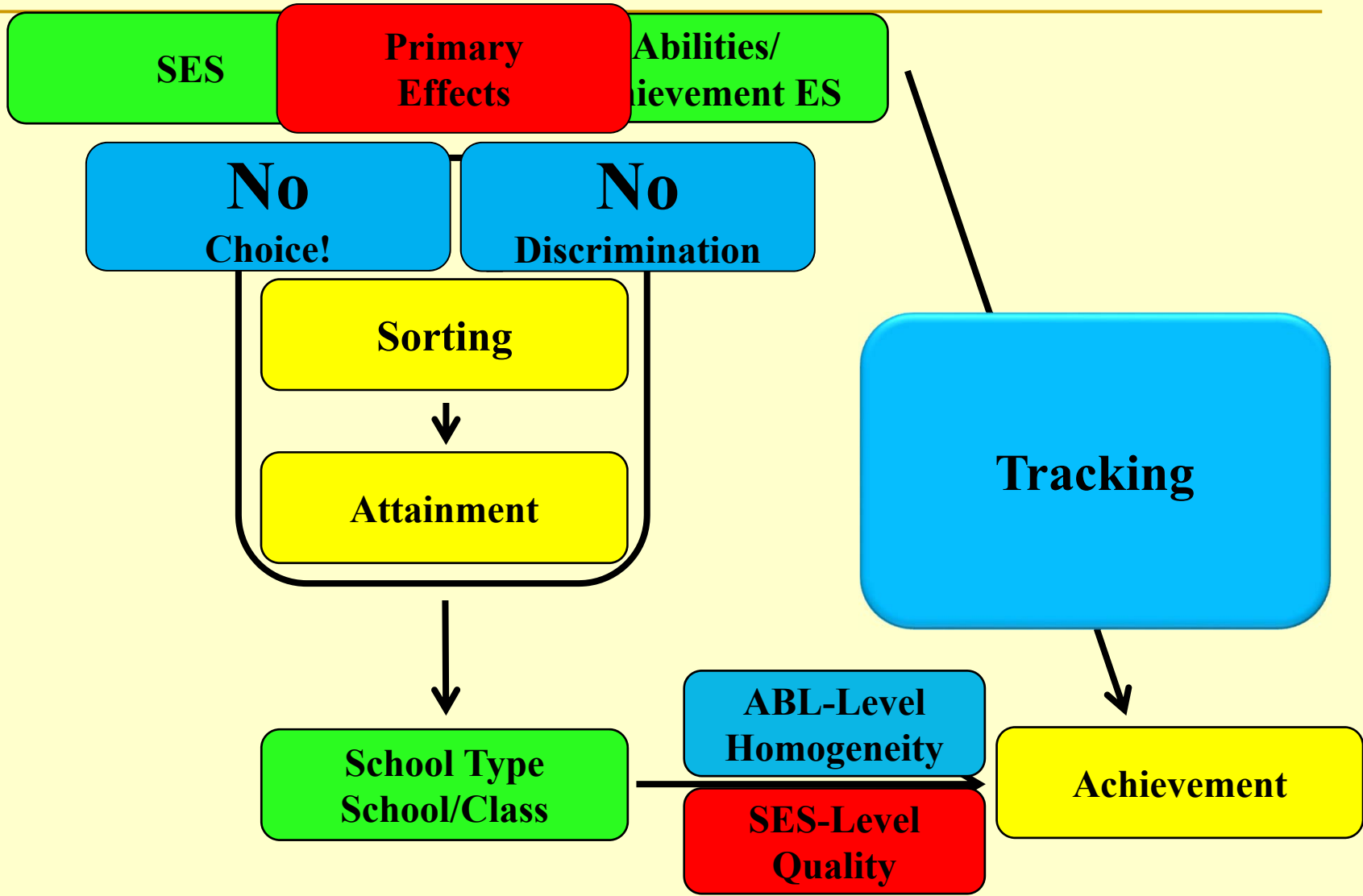
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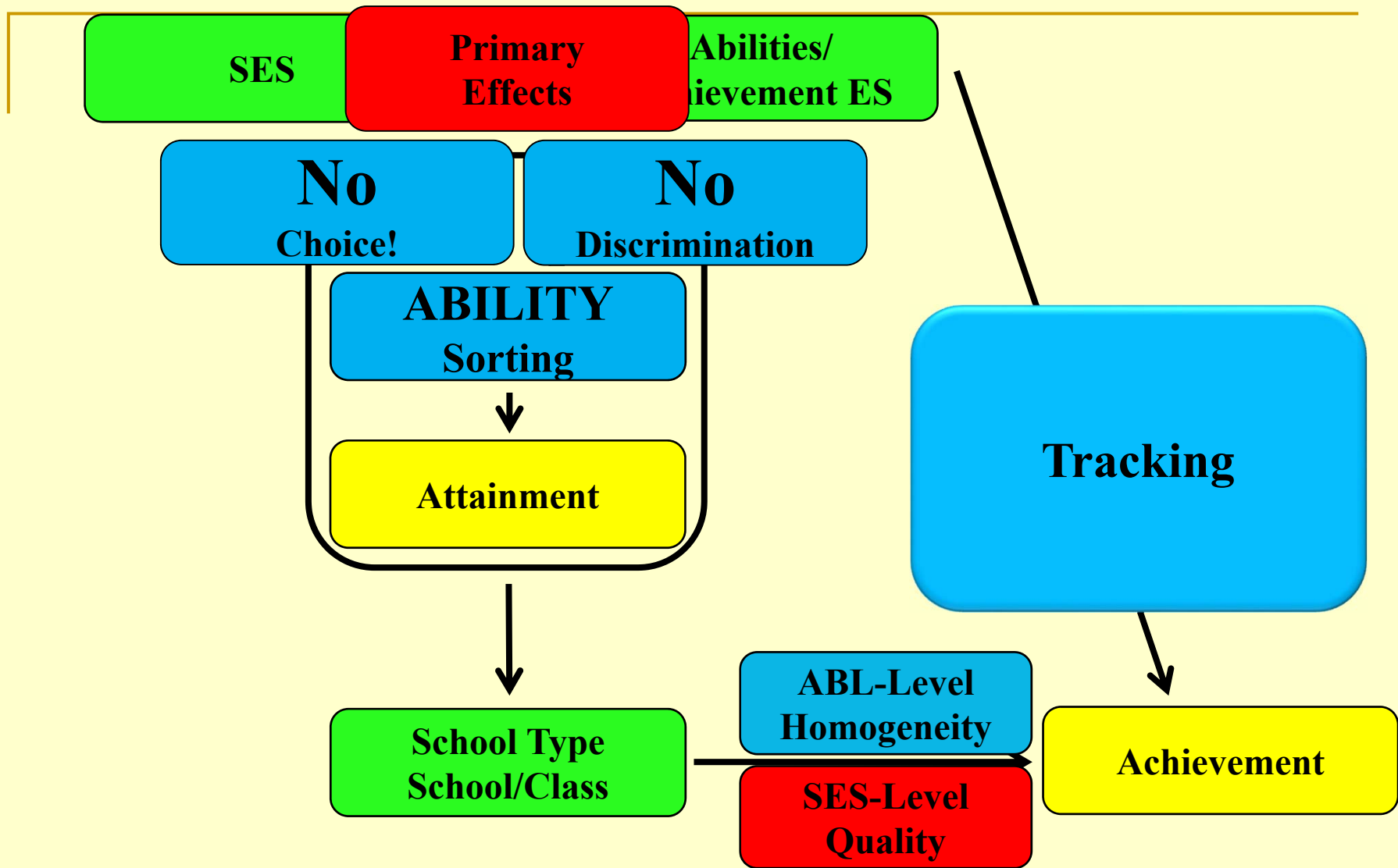
**Ability Tracking 2:  
„Meritocratic“  
Sorting**

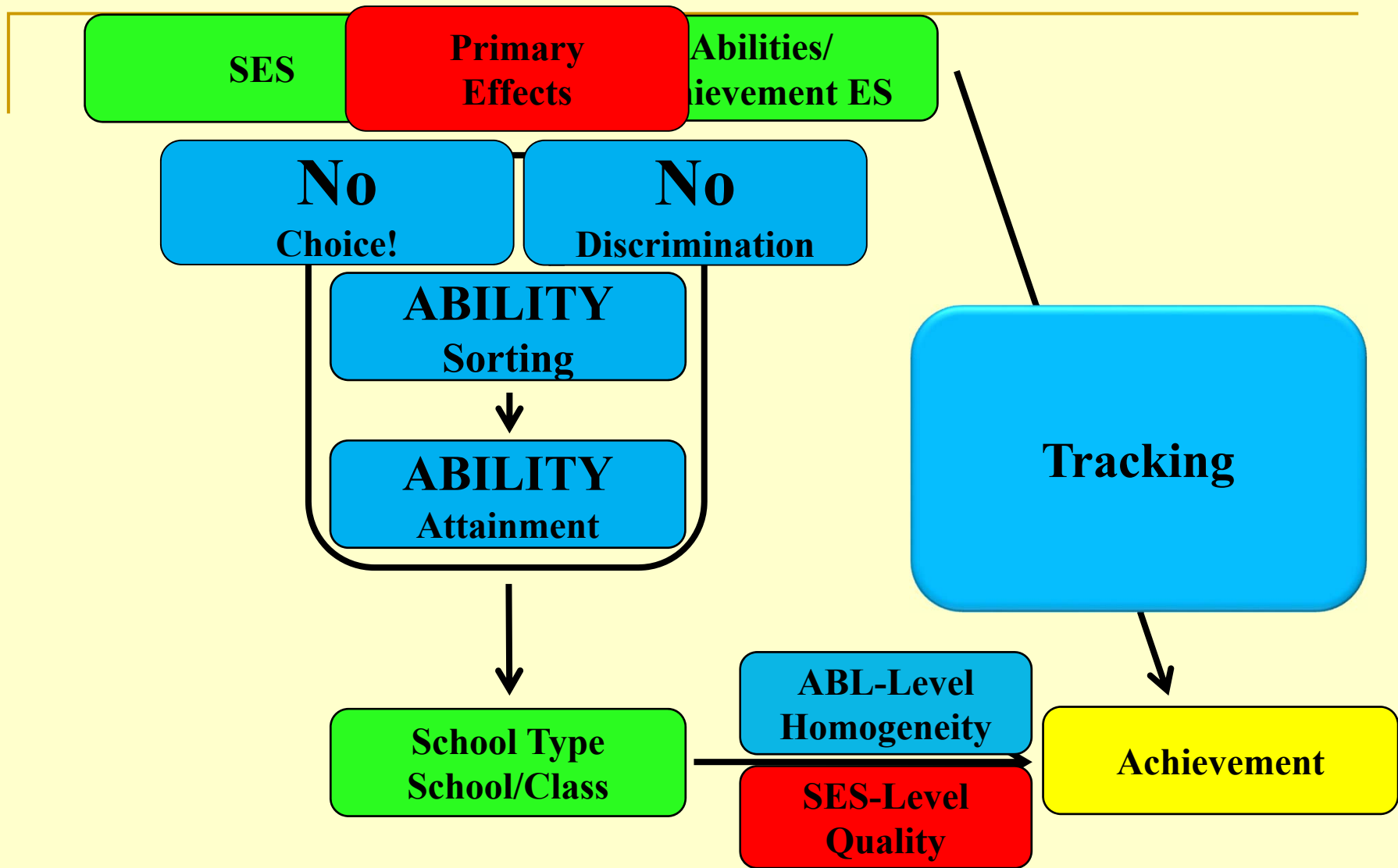
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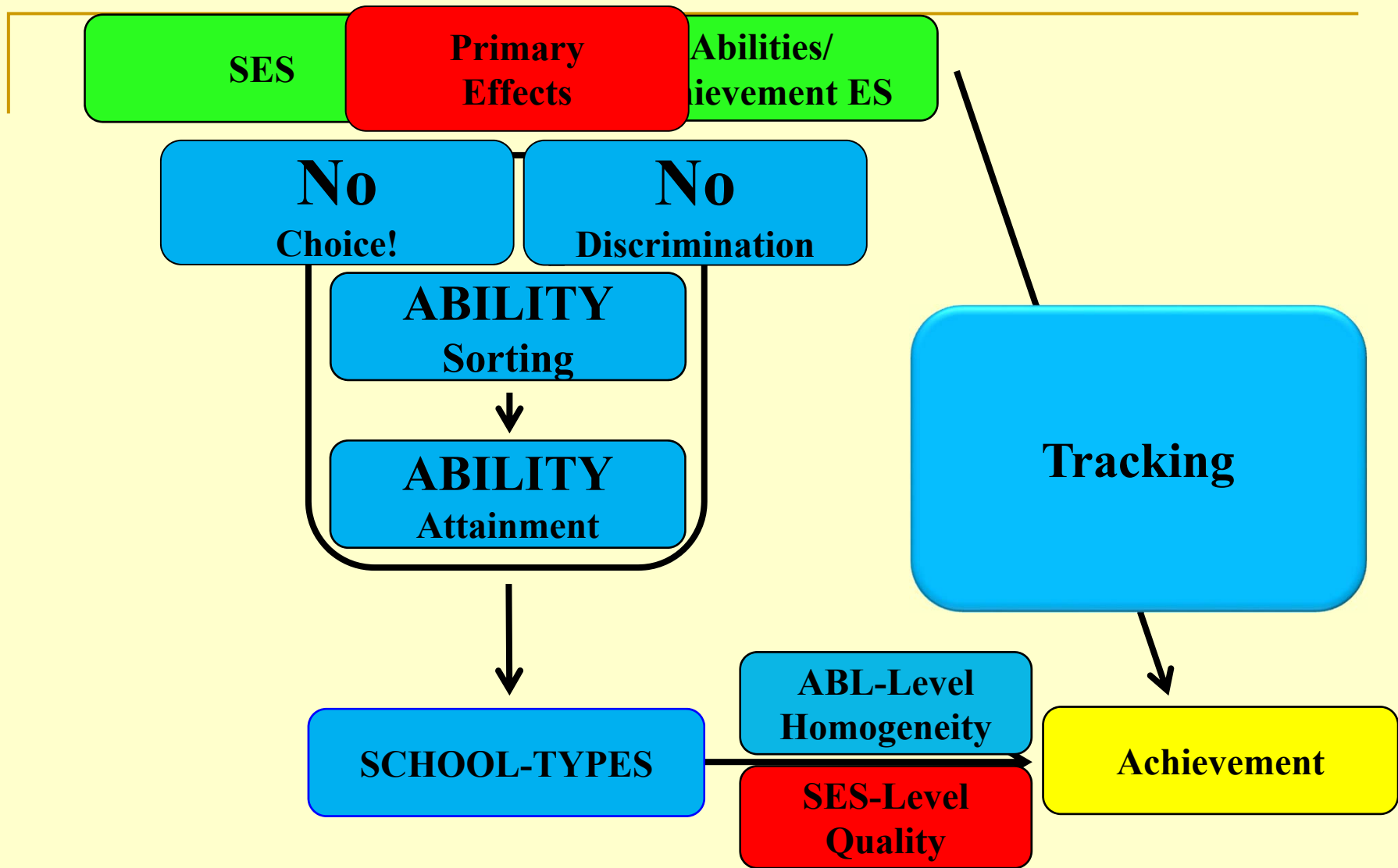


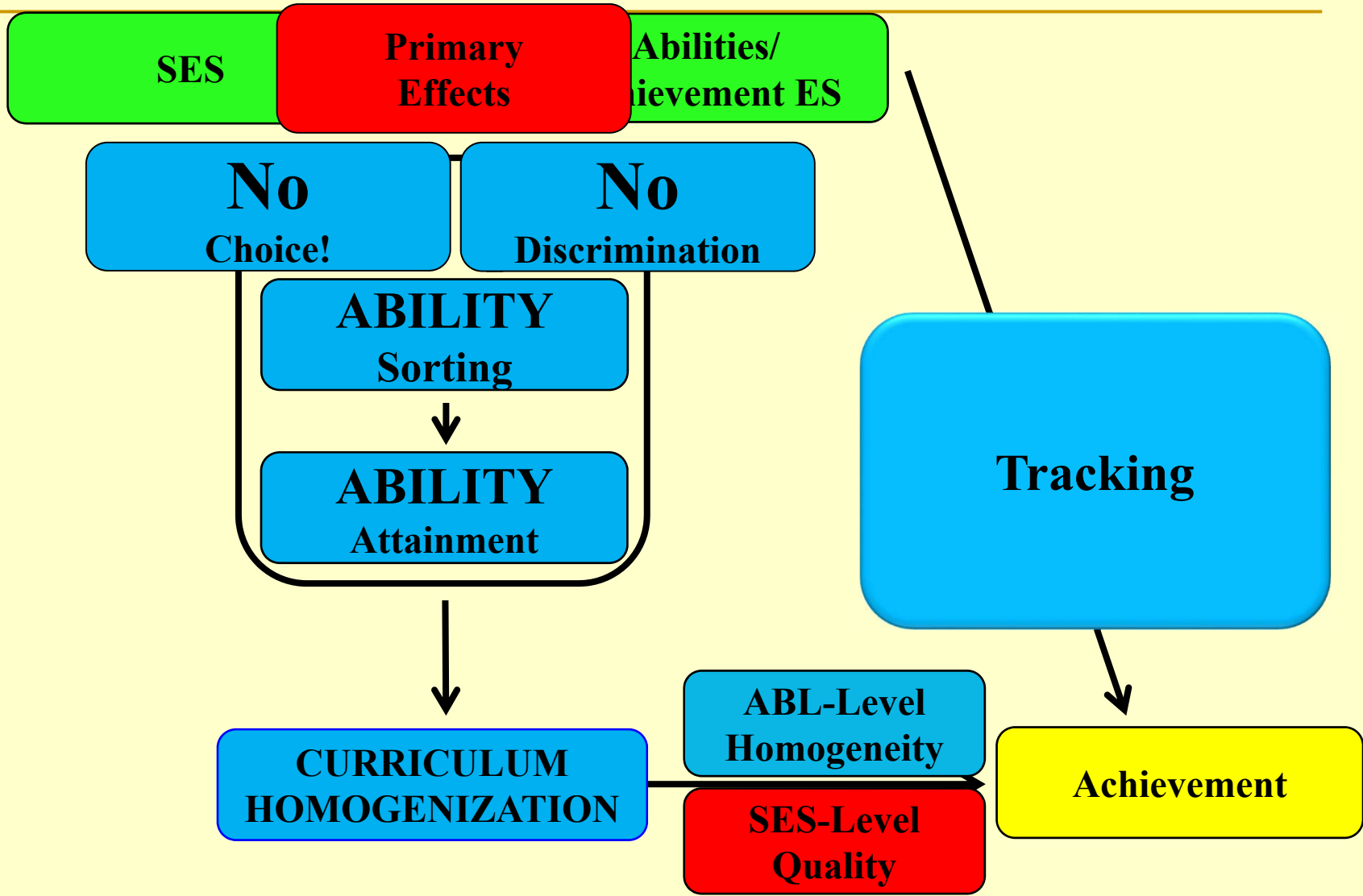


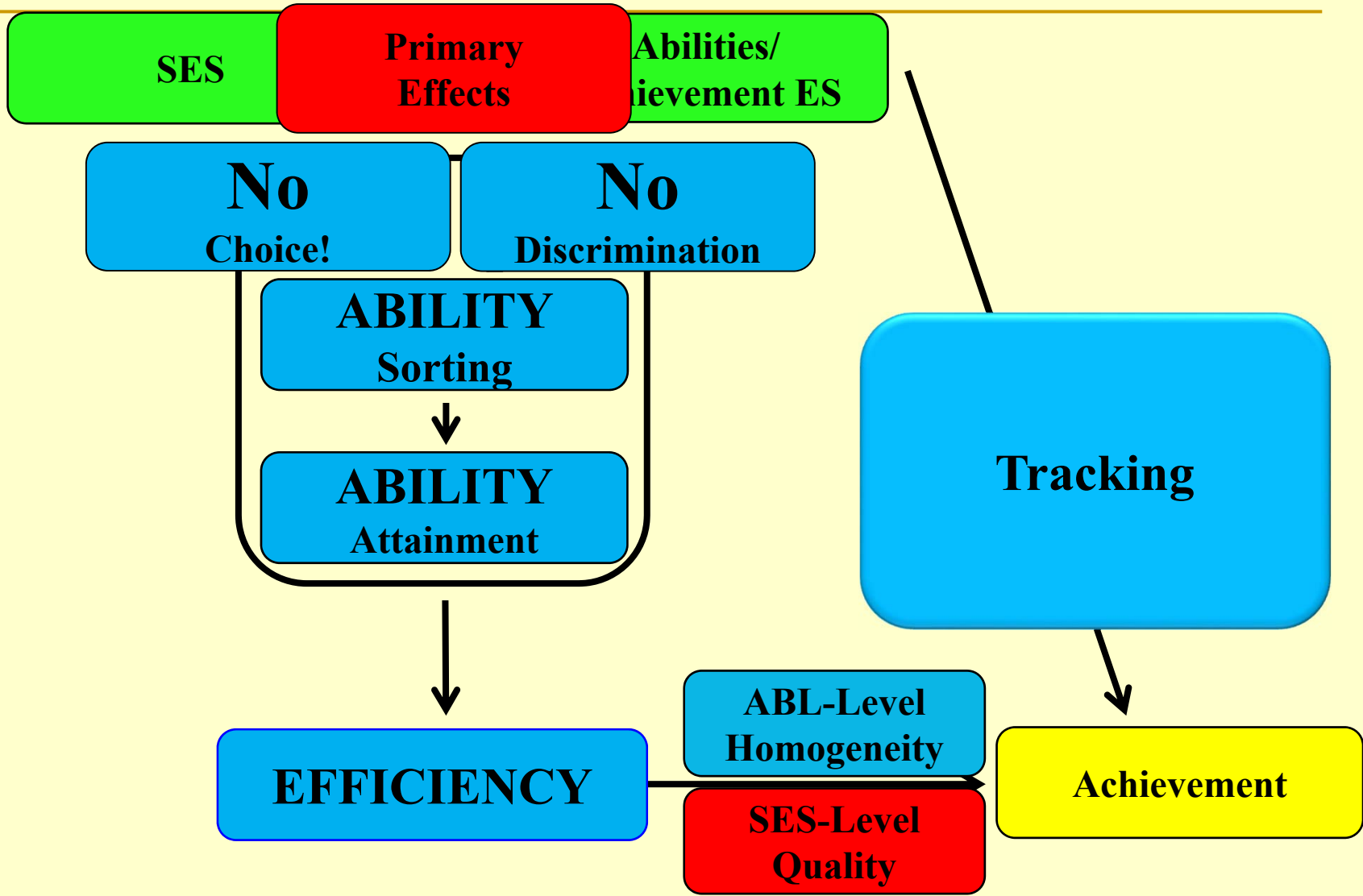


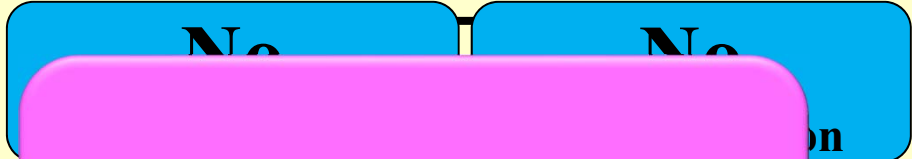
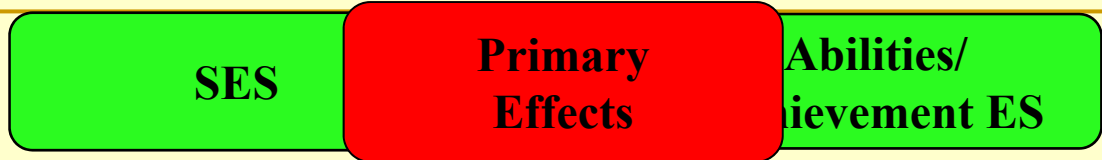












Ability Tracking improves achievement

ABILITY Attainment

... without increasing educational inequality and inequity!

EFFICIENCY

ABILITY LEVEL Homogeneity

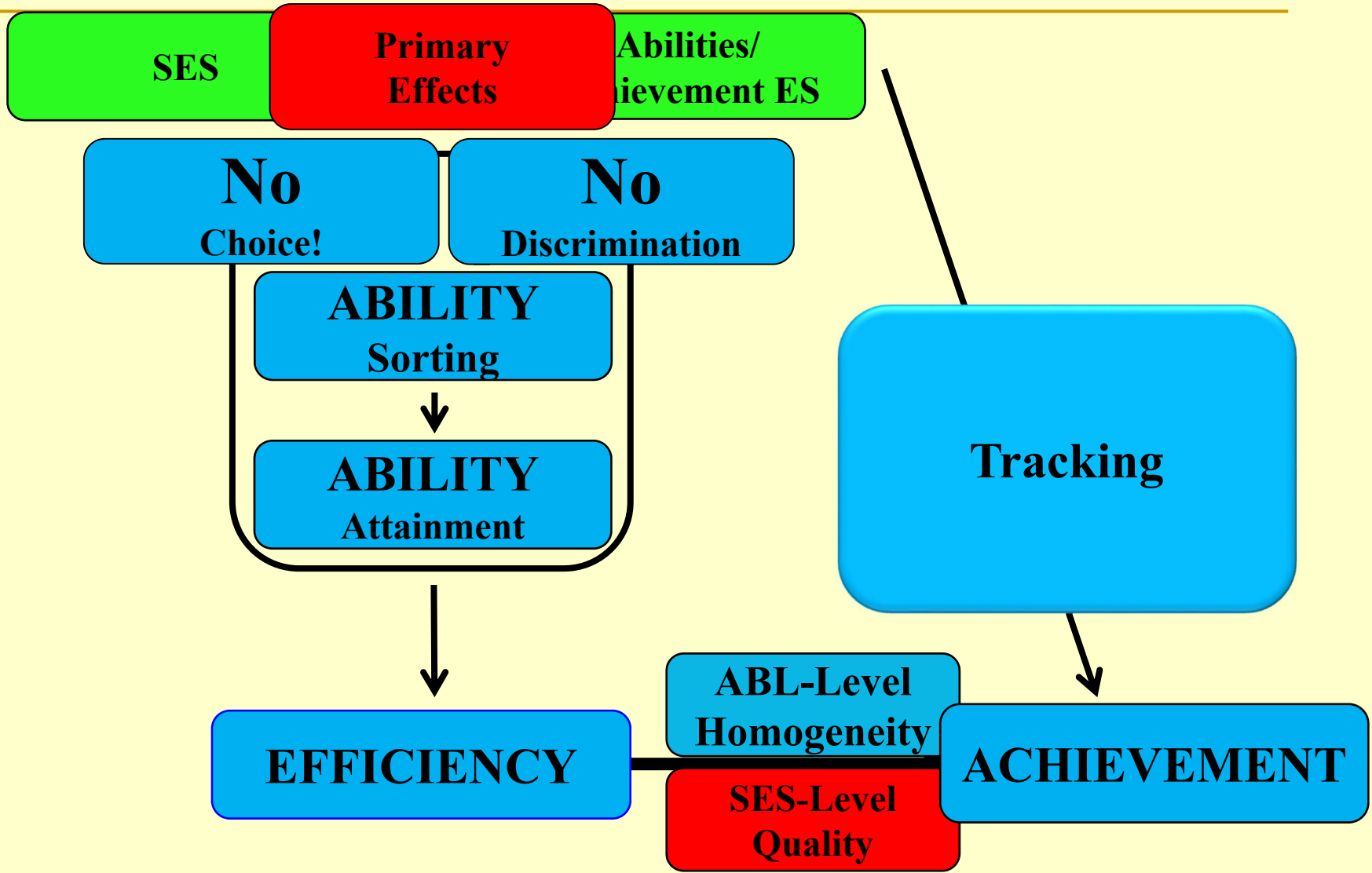
SES-Level Quality

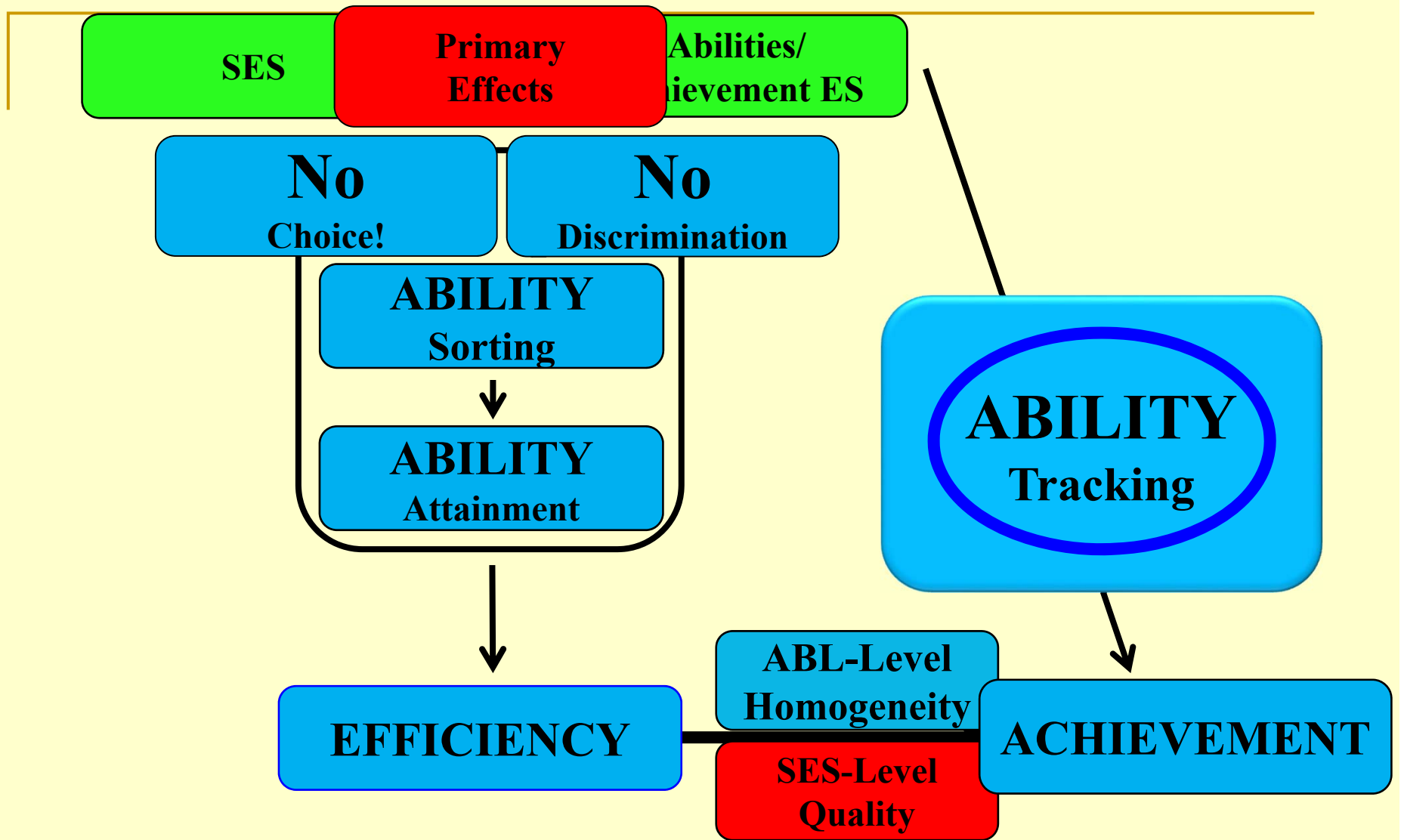
ACHIEVEMENT

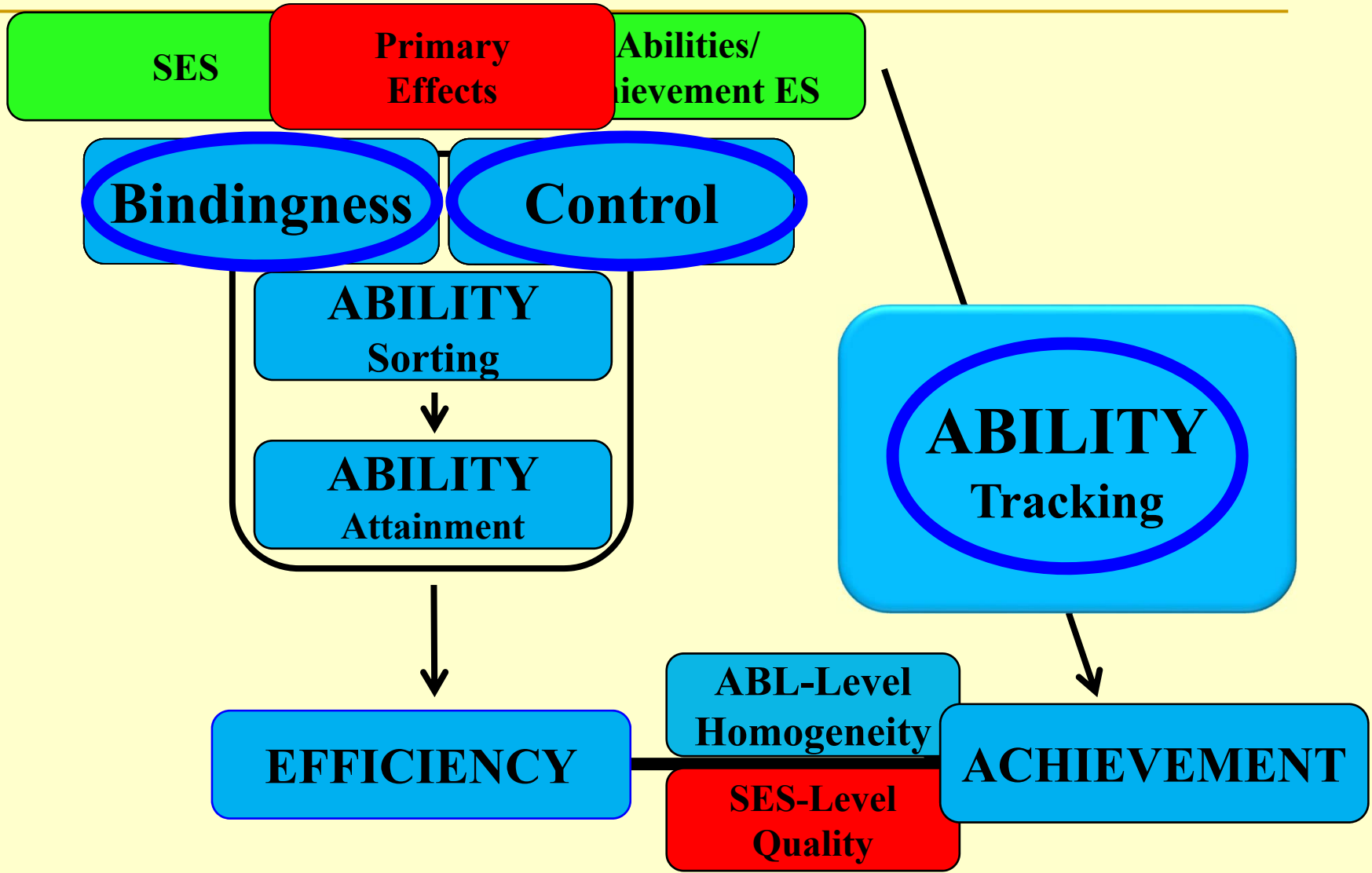
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## **System-Effects**

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**Ability Tracking  
improves achievement**

**... without increasing  
educational inequality  
and inequity ...**

**... if ABILITY  
Tracking!**

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# Hypotheses

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		Attainment	Homogenization	Achievement
<b>General Effects</b>		MoAbiT	MoAbiT	MoAbiT
Social background	SES	+		+
Abilities	ABL	+		+
Achievement before	ACE	+		+
Marks/Recommend.	REC	+		
Aspirations	ASP	+		
School LevelSES	LSES			+
School LevelABL	LABL			+
School HomABL	HABL			
Schooltype/Track	GYM			+
<b>System-Effects</b>				
Tracking	T	$\leq 0$	+	$\geq 0$
Interaction-Effects	SES *T	0		0
	LSES *T			0
	ABL *T	+		+
	LABL *T			+
	HABL *T			+

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**Set Up**

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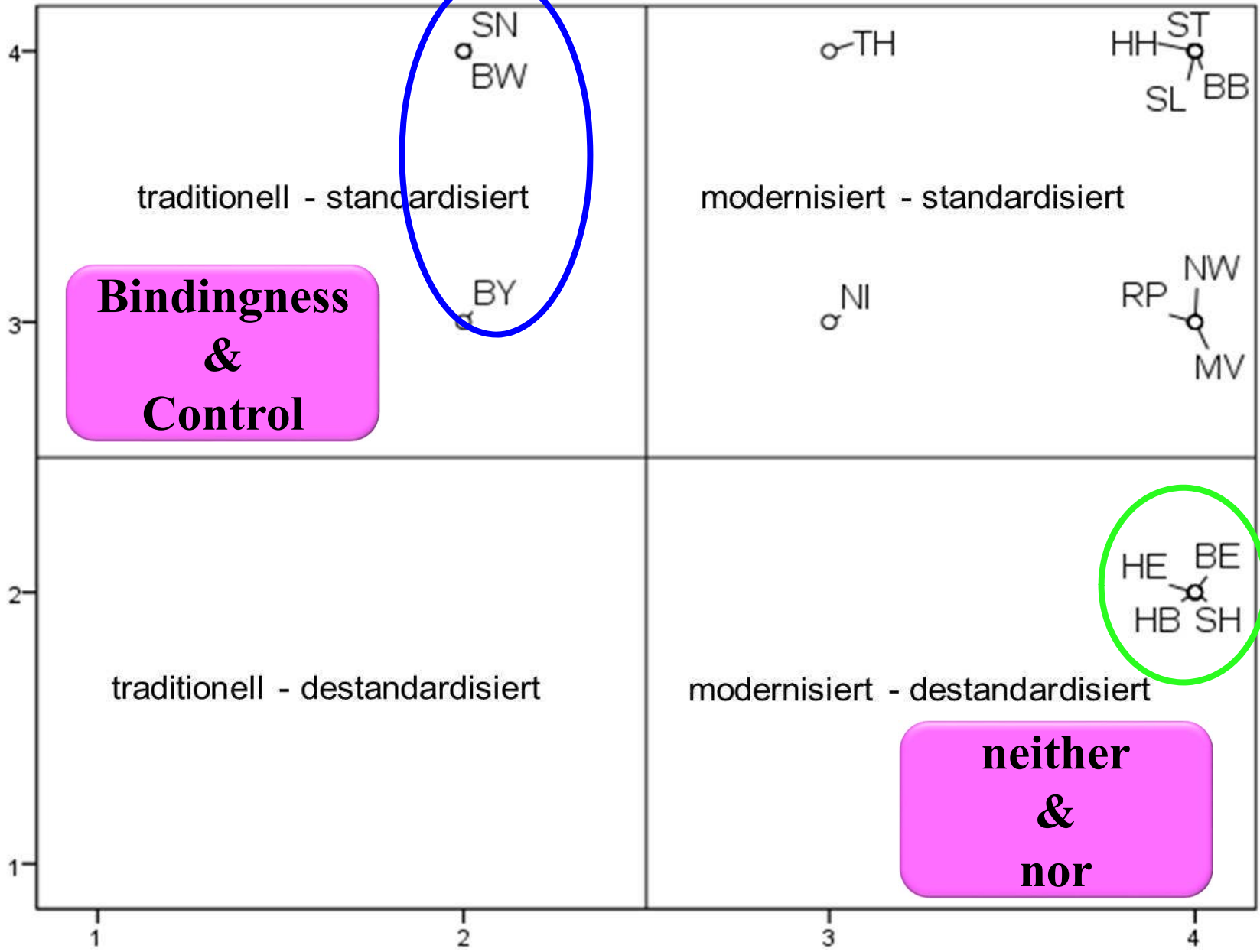
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## German Country States and their Educational Systems

von Below 2006, 2011  
Helbig&Nikolai 2015  
Büchler 2016

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Kontrolle von Inhalten 1=destandardisiert 4=standardisiert



**Bindingness  
&  
Control**

**neither  
&  
nor**

Struktur 1=traditionell 4=modernisiert

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Index (Helbig&Nikolai 2015, Abb. 28: 286)

- 2 ---
  - 3 BE, HB, HE, SH
  - 4 NW, RP, MV
  - 5 BB, HH, NI, SL, ST, TH
  - 6 BY
  - 7 BW, SN
  - 8 ---
-

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Index (Helbig&Nikolai 2015, Abb. 28: 286)

- 2 ---
  - 3 **BE, HB, HE, SH**
  - 4 NW, RP, MV
  - 5 BB, HH, NI, SL, ST, TH
  - 6 **BY**
  - 7 **BW, SN**
  - 8 ---
-



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**Data**

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NEPS

(„National Educational Panel Study“)

Starting Cohort 3

three waves

5th, 6th and 7th grade

2010, 2011, 2012

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# Results

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1. Attainment
  2. Homogenization
  3. Achievement
  4. Homogeneity&Homogenization
  5. Who Gains?
-

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**1. Attainment**

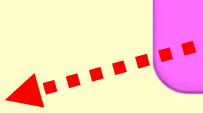

2. Homogenization

3. Achievement

4. Homogeneity&Homogenization

5. Who Gains?

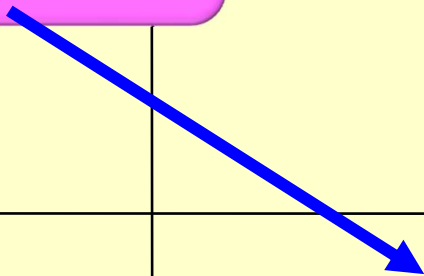
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		Attainment		Homogenization	Achievement
General Effects		MoAbiT	NEPS		
Social background	SES	+	<b>0.016</b>		
Abilities	ABL	+	...		
Achievement before	ACE	+	<b>0.555</b>		
Marks/Recommend.	REC	+	<b>2.461</b>		
Aspirations	ASP	+	<b>3.419</b>		
School LevelSES	LSES				
School LevelABL	LABL				
School HomABL	HABL				
Schooltype/Track	GYM				
System-Effects					
Tracking	T	$\leq 0$	-0.438		
Interaction-Effects	SES *T	0	0.009	 <p><b>no</b> change of <b>SES</b>-influence</p>	
	LSES *T				
	ABL *T	+	<b>0.775</b>	 <p><b>increase</b> of <b>ACE</b>- influence</p>	
	LABL *T				
	HABL *T				
R <sup>2</sup>			0.59		
N			3150		

- 
1. Attainment
  - 2. Homogenization**
  3. Achievement
  4. Homogeneity&Homogenization
  5. Who Gains?
-

		Attainment	Homogenization		Achievement
<b>General Effects</b>			MoAbiT	NEPS	
Social background	SES				
Abilities	ABL				
Achievement before	ACE				
Marks/Recommend.	REC				
Aspirations	ASP				
School LevelSES	LSES				
School LevelABL	LABL				
School HomABL	HABL				
Schooltype/Track	GYM				
<b>System-Effects</b>					
Tracking	T		+	0.002	
Interaction-Effects	SES *T				
	LSES *T				
	ABL *T				
	LABL *T				
	HABL *T				
R <sup>2</sup>				0.04	
N				2717	

**increase of  
ABL-Homogeneity**





- 
1. Attainment
  2. Homogenization
  - 3. Achievement**
  4. Homogeneity&Homogenization
  5. Who Gains?
-

		Attainment	Homogenization	Achievement	
General Effects				MoAbiT	NEPS
Social background	SES			+	<b>0.008</b>
Abilities	ABL			+	<b>1.744</b>
Achievement before	ACE			+	...
Marks/Recommend.	REC				
Aspirations	ASP				
School LevelSES	LSES			+	<b>0.023</b>
School LevelABL	LABL			+	-0.640
School HomABL	HABL				
Schooltype/Track	GYM			+	<b>0.625</b>
System-Effects					
Tracking	T			≥0	-0.236
Interaction-Effects	SES *T			0	0.000
	LSES *T			0	-0.002
	ABL *T			+	-0.062
	LABL*T			+	<b>0.421</b>
	HABL*T				
R <sup>2</sup>					0.52
N					2717

**no** change  
of SES-influence

**increase** of  
LABL-influence

0  
0  
+  
+

-0.236  
0.000  
-0.002  
-0.062  
**0.421**

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# Summary

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			nt	Homogenization	Achievement		
General			EPS				
Social			016				
Ability			..				
Achie			555				
Marks/Recommend.	REC	+	2.461				
Aspirations	ASP	+	3.419				
School LevelSES	LSES				+ 0.023		
School LevelABL	LABL				+ -0.640		
School HomABL	HABL						
Schooltype/Track	GYM				+ 0.625		
<b>System-Effects</b>							
Tracking	T	$\leq 0$	-0.438	+	0.002	$\geq 0$	-0.236
SES *T	SES *T	0	0.009			0	0.000
NSES *T	LSES *T					0	-0.002
ABL/ACE*T	ABL *T	+	0.775			+	-0.062
NABL *T	LABL*T					+	0.421
HABL *T	HABL*T						
R <sup>2</sup>			0.59		0.04		0.52
N			3150		2717		2717

**Ability Tracking improves achievement**

**... without increasing educational inequality and inequity ...**

**!!!**

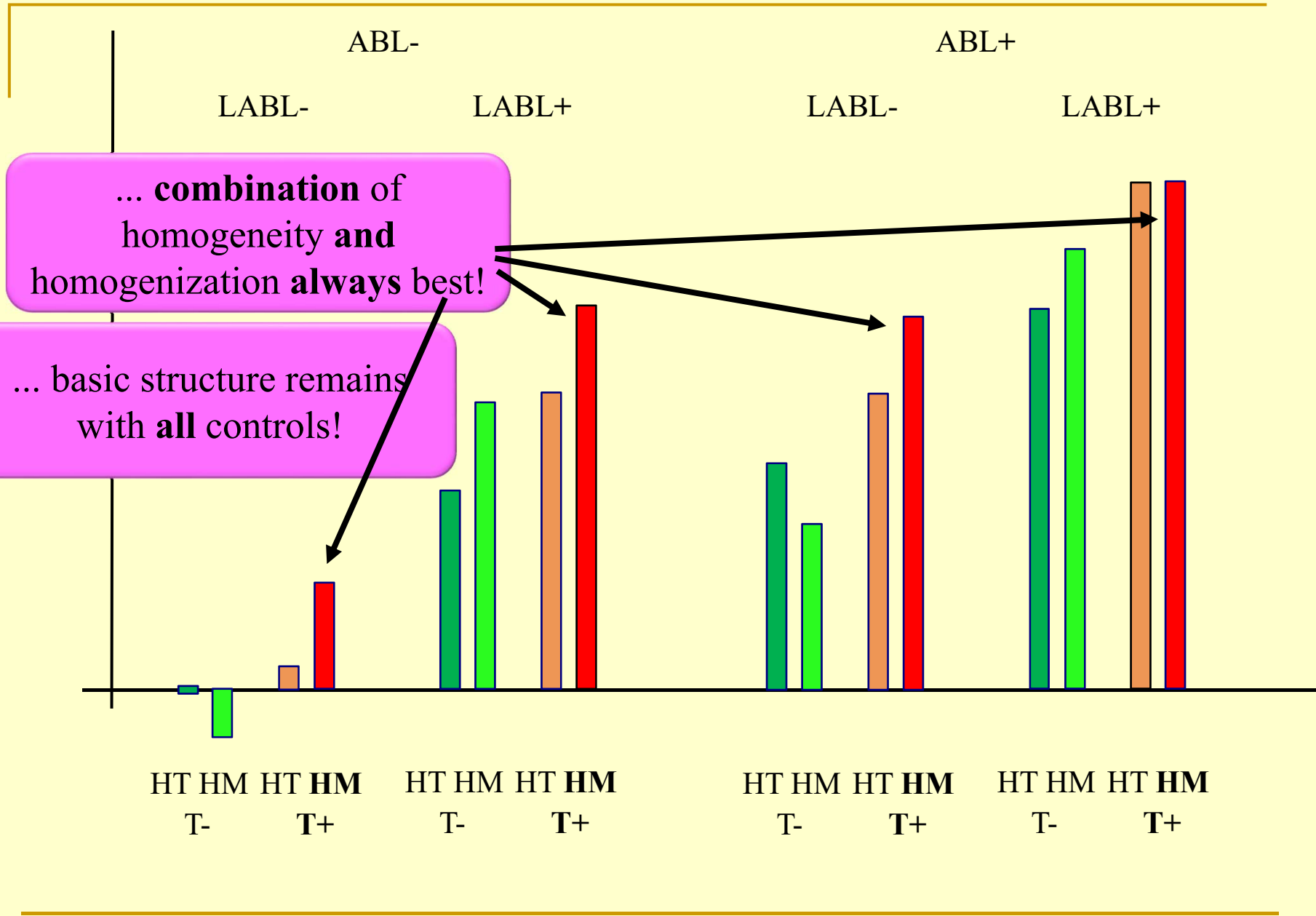
**System-Effects**

better  
„match“ and „focus“ of  
instruction!

stronger incentives for  
engaged instruction!

1. Attainment
2. Homogenization
3. Achievement
4. **Homogeneity&Homogenization**
5. Who Gains?

dummies for ABL,  
LABL, T and  
HET/HOM



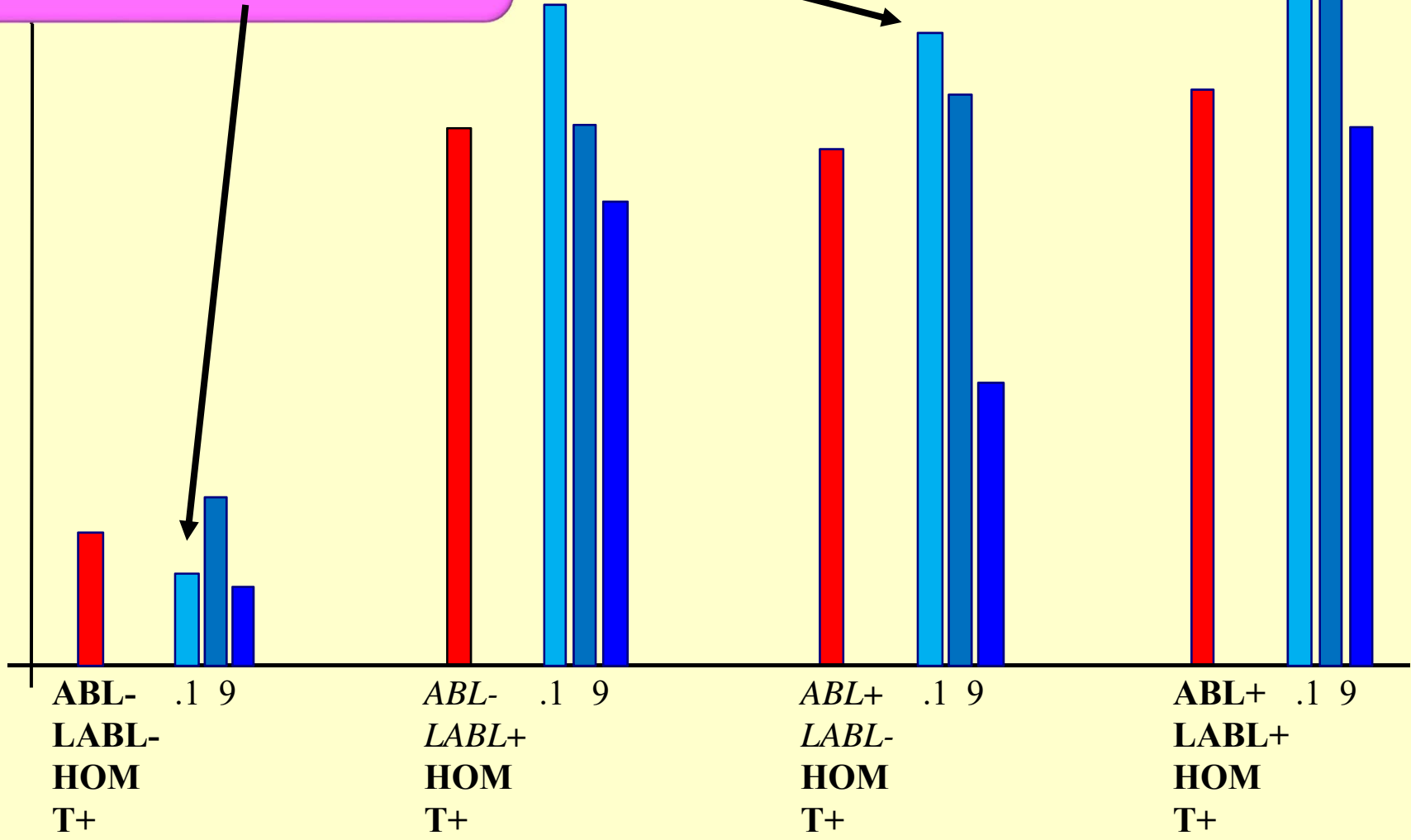
... combination of homogeneity and homogenization **always** best!

... basic structure remains with **all** controls!

HT HM HT HM HT HM HT HM HT HM HT HM HT HM  
 T- T+ T- T+ T- T+ T- T+ T- T+

- 
1. Attainment
  2. Homogenization
  3. Achievement
  4. Homogeneity&Homogenization
  - 5. Who Gains?**
-

... low achievers





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# Summary

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**Ability** Tracking  
improves achievement

... **without** increasing  
educational inequality  
and inequity ...

... via ABL-  
**Homogeneity** and  
**-Homogenization**

... and **gains** especially  
for **low** achievers!

